Welch Allyn®
Kreativ™

Klean Air® II

Instructions for Use

Please read this manual thoroughly
prior to first use

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TABLE OF CONTENTS

1. INTRODUCTION AND GENERAL INFORMATION 3

2. SAFETY 6
WARNINGS 6
CAUTIONS 6
SAFETY MARKINGS ON LABELS 7

3. CONTROLS AND CONNECTORS 8
ITEM DESCRIPTIONS 8
FUNCTIONAL DESCRIPTION 9

4. UNPACKING AND SETUP 10
GENERAL INFORMATION 10
UNPACKING AND SETUP 10
ELECTRICAL REQUIREMENTS 10

5. OPERATION 11
FILTER PANEL INDICATORS 11
UNIT SHUTDOWN 12

6. SERVICING 13

7. TROUBLESHOOTING AND MAINTENANCE 14

8. RECYCLING 15
RECYCLING INSTRUCTIONS FOR DEVICE, ACCESSORIES AND PACKAGING 15
ENVIRONMENTALLY RELEVANT MATERIAL 15

9. WARRANTY, RETURNS AND ADJUSTMENTS 16
RETURNS AND ADJUSTMENTS 16
LIMITED WARRANTY 16
STORAGE AND SHIPMENT 17

Chapter

1

1. Introduction and General Information

Introduction

The Kreativ Model Klean Air® II is a highly efficient, compact, state-of-the-art instrument designed for air filtration. It is designed to be used with the dental office high velocity evacuation (HVE) to eliminate overspray from air abrasion procedures.

Purpose of this Manual

This manual should be thoroughly studied before using the equipment. Please call your nearest authorized Welch Allyn / Kreativ service representative if you need additional information regarding installation, operation, or service of the unit.

Information essential to the installation, operation, and routine maintenance of the Klean Air II device manufactured by Kreativ, Inc., is included in this manual.

General Information and Features

A combination pre/charcoal filter serves two distinct purposes. The pre-filter captures aluminum oxide particles, old composites and other large particles. The charcoal removes most dental office odors and gasses.

A third-stage filter eliminates the biological aerosol created by a high speed drill. This HEPA filter, similar to the type used in a hospital operating room, removes 99.97% of airborne biological contaminants down to 0.3 microns in size.

Features

- High Power Operation
- Low Power Operation
- Easy to read LED Display
- Visual Filter status indicator
- Quick detachable hose for easy access
- Doors for easy filter replacement
- Convenient handle
- Mobility

Specifications

- Power Requirements: 100-127 volt, ~, 60 Hz., 1.75A

  220-240 volt, ~, 50 Hz., 650 mA

  IEC 320 socket with removable cord is located at back; verify unit has correct voltage before use

- Air Flow: 80 cfm (low) or 120 cfm (high) (2.26 or 3.39 m^3/min)
- Approximate Size: 13" x 13" x 27" (33 x 33 x 68.6 cm)
- Approximate Weight: 45 lbs. (20.4 kg)
- Control Panel: located on door of instrument for easy viewing
- Filters: HEPA DOP 99.97% / 99.99% and activated carbon pre-filter
- Filter Replacement: user access through door
- Hose: 3" dia. (7.6 cm), 3' (91 cm). length with expanded intake
- Power Switch: located adjacent to power inlet
- Environment Limitations:

  Operational Requirements:
  Temperature: 50° to 95° F (+10° to 35° C)
  Humidity: 30 % to 75 %
  Pressure range: 10.15 to15.37 psia (70 to 106 kPa)

  Transport and Storage Requirements:
  Temperature: 14° to 122° F (-10° to 50° C)
  Humidity: 10 % to 90 %
  Pressure range: 7.25 to 15.37 psia (50 to 106 kPa)

- Equipment Classification: the Kreativ Model Klean Air II system is an EC Class I device requiring an electrical earth ground. This device is classified as ordinary with regard to protection against water ingress.
- Electrical Fuses: Littelfuse, SlowBlow

Model	Fuse Mfr.	Mfr. P/N	Kreativ P/N	Fuse Rating
Klean Air II Domestic	Littelfuse	Type 218-02.5	600109	2.5A, 250Vac
Klean Air II European	Littelfuse	Type 218-01.6	600096	1.6A, 250Vac

- UL Canadian Classification Marking:

Oral Vacuum, Model 8000-XX
(where XX can be any alphanumeric character)
WITH RESPECT TO ELECTRIC SHOCK, FIRE, MECHANICAL
AND OTHER SPECIFIED HAZARDS ONLY
IN ACCORDANCE WITH CAN/CSA C22.2 NO. 601.1
21ZJ

Chapter

2

2. Safety

Warnings

Make sure that the Kreativ Klean Air II is connected to a properly grounded electrical outlet.

Use protective rubber gloves when changing the filters and properly dispose of them when you are finished.

Be sure to wipe down the patient end of the hose with disinfectant and replace the Intake Liner prior to each patient use.

Always replace fuses with fuses of the proper rating as indicated in the Specifications section of the previous chapter.

Cautions

Do not attempt to service the unit beyond those items described in the mainten-ance section. Call your nearest authorized Welch Allyn / Kreativ service representative for instructions.

Do not substitute non-Kreativ, Inc., materials or accessories. Use of materials or accessories supplied by other manufacturers may result in damage to the unit and will void the factory warranty.

Sound clinical judgment and good common sense are essential to the successful use of the unit in order to provide safe and efficient patient care.

Always follow "standard of care" protocols in performing dental operative procedures.

Safety Markings on Labels

Alternating current

Protective earth (ground)

Attention, consult accompanying documents

Off (power: disconnection from the mains)

On (power: connection to the mains)

Type B equipment (defines the degree of protection against electrical shock)

Dangerous voltage

Chapter

3

3. Controls and Connectors

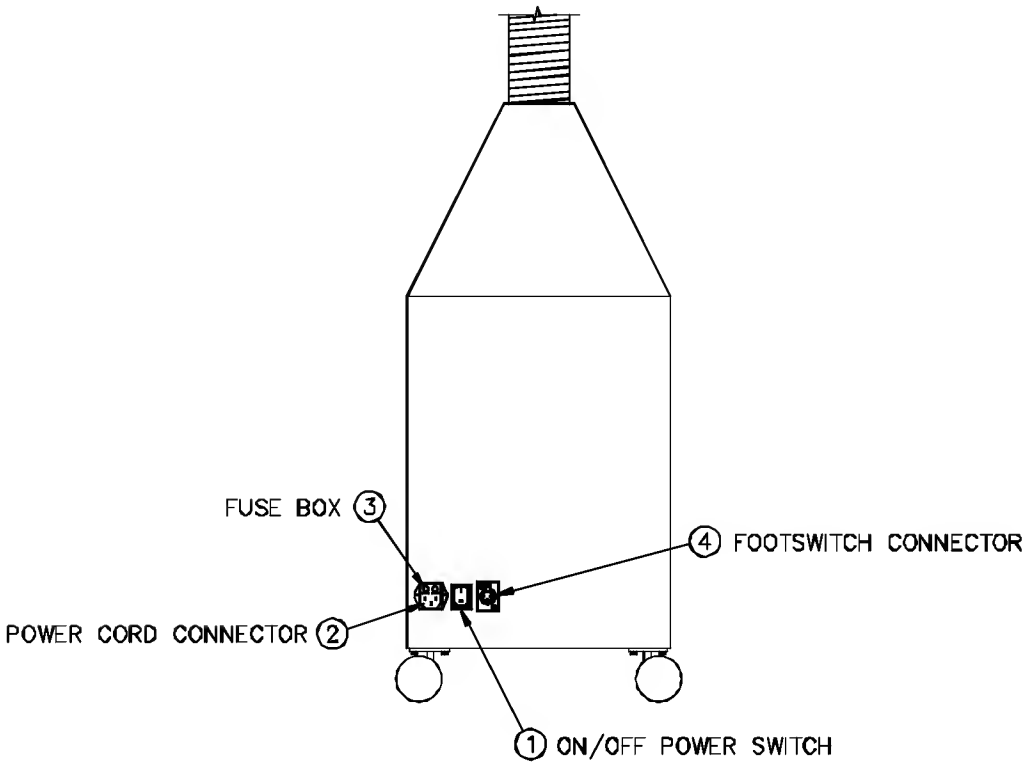
The diagrams on the following pages illustrate the external controls, indicators, and connections for the Kreativ Model Klean Air II instrument.

Item Descriptions

Refer to the Drawings in this section for the following items.

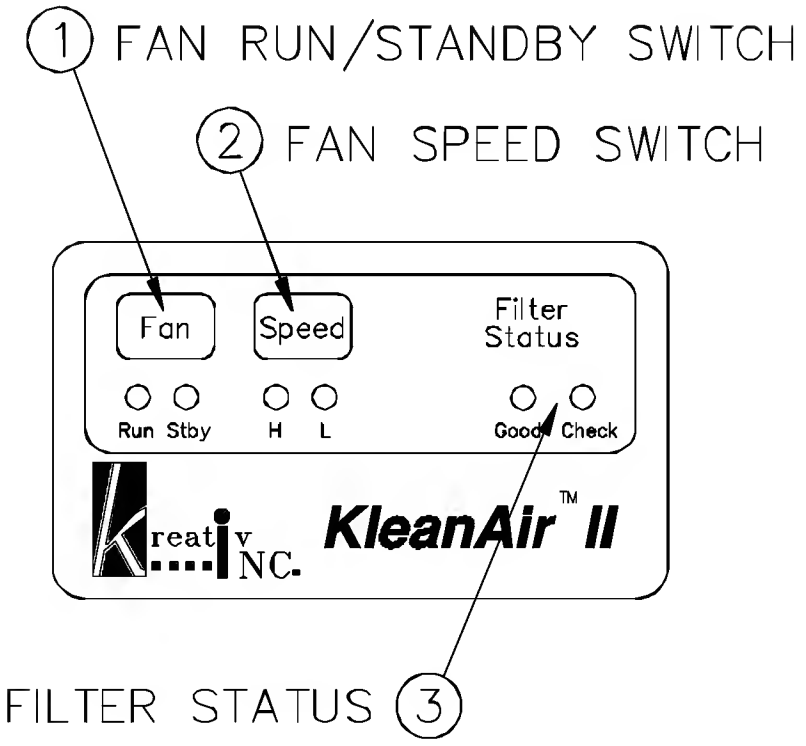
Connections

(1) On/Off Power Switch turns power on or off to the entire instrument
(2) Power Cord connection point for the power cord
(3) Fuse Box, the location of the instrument fuses
(4) Footswitch connection point for footswitch



Control Panel

(1) Fan Run/Standby Switch activates/de-activates the fan
(2) Fan Speed Switch controls High/Low fan speed
(3) Filter Status Lights indicate filter's status



Functional Description

WARNING: Do not attempt to open the doors of the unit with power turned on!

When the unit is initially turned on, the unit will be in standby and the fan speed will be automatically set to Low. The fan may be turned on by the fan switch or by the footswitch; the fan switch and footswitch can be used interchangeably.

The fan speed may be toggled from Low to High or High to Low in standby or when the fan is running. When the unit is turned to standby, the High/Low switch will remain in the last setting used. When the unit is completely turned off and then on again the fan speed will be set to Low.

Chapter

4

4. Unpacking and Setup

General Information

SAVE THE CARTON!

The Klean Air II and all accessories are shipped in a single container. When unpacking, check items against the packing list included with the unit. The shipping container and packing materials should be retained in the unlikely event that the instrument has to be shipped for service or repair.

Unpacking and Setup

Remove the Klean Air II unit from the shipping container and proceed as follows:

- Open the accessory carton containing the flexible tube assembly, the white gooseneck assembly, and the latch-over-center clamp.
- Attach the gooseneck assembly to the air inlet by threading it on to the threaded stud.
- Place a clear plastic cover over the flexible tube, then place the flexible tube over the gooseneck and around the short pipe section.
- Fasten the gooseneck in place with the supplied latch-over-center clamp.
- Place an intake liner (hose cover) over the flexible tube opening when you are ready to use the instrument. The liner should be replaced for each patient use.
- Attach the power cord into the appropriately grounded AC outlet.

Electrical Requirements

Reference the Specifications section of Chapter 1 of this manual for the power requirements of the unit. The power requirements of your instrument are located on the system label on the back cover of the instrument. Verify the unit is set up correctly for your electrical supply. When replacing fuses, only use fuses supplied in your customer kit. If your requirements are different, consult your nearest authorized Welch Allyn / Kreativ service representative before operating this instrument.

Chapter

5

5. Operation

After completing the setup instructions in Section 4 you are now ready to operate your Kreativ Klean Air II. Refer to the drawings and descriptions in Section 3 for the identification of the external controls and connections.

1. Position the Klean Air II instrument by the chair so that the hose will reach to the patient's face. The intake should be about 8 inches from the patient's face.
2. Place the foot switch (available as an optional accessory) in a location easily reached for convenient operation.
3. Plug the power cord into the unit and into a properly grounded AC outlet.
4. Be sure to wipe down the patient end of the hose with disinfectant and replace the intake liner prior to each patient use.
5. Turn on the power switch located at floor level on the back of the unit. The unit in standby mode uses very little power and can be left on, ready for use.
6. Pressing the "Fan" switch on the panel or the footswitch will turn on the fan. Pressing the "Fan" switch or footswitch again turns off the fan. The foot switch and the panel switch are interchangeable, i.e., the unit can be turned on with one and off with either.
7. The air flow can be controlled with the speed switch. As long as the unit is not turned off via the main power switch (i.e., left in standby between uses), the Klean Air II will remember the speed setting. If the unit is turned off the default speed is Low when the unit is turned on again.

Filter Panel Indicators

As long as the air flow through the Klean Air II is unimpeded (i.e., the filters are not clogged) the indicator light will show green. If the indicator shows a blinking red light, check the pre-filter and replace it. If the unit continues to blink, remove the HEPA filter and check the unit again. If the blinking stops, the HEPA filter is clogged. Note that the light cannot be tested while covering the mouth of the hose, since the sensor measures the pressure drop across the filter.

Unit Shutdown

1. Set the Air switch to the Standby position.
2. Set the Power Switch to OFF position.

Chapter

6

6. Servicing

Both filters can be individually changed through the front door. The top filter is the pre-filter which also contains the activated carbon absorber. This should be changed monthly but may need to be changed more often under heavy use. The lower filter is the HEPA filter and will need to be changed once a year under normal usage.

Use protective rubber gloves when changing the filters and properly dispose of them when you are finished.

To remove the pre-filter, lift slightly at the front and slide it toward you. Bag the filter immediately and dispose it. Remember, this filter will contain accumulated powder so handle it carefully.

To remove the HEPA filter, lift the front high enough to clear the door lip and slide it toward you. The bottom of the filter has a soft gasket. When inserting the new filter, make sure you do not tear the gasket on the door lip and that the gasket is facing down.

Chapter

7

7. Troubleshooting and Maintenance

The following table is intended to assist in communicating with your nearest authorized Welch Allyn / Kreativ service representative.

PROBLEM	POSSIBLE CAUSE	REMEDY
No Power	• Instrument not plugged in	• Check Plug
	• Main Switch OFF	• Check Switch
	• Blown Fuse	• Change Fuse with fuse specified in Chapter 1
	• Main Switch Bad	• Call nearest service rep.
	• Control Panel Not Connected	• Call nearest service rep.
No Air Flow	• Filter(s) Plugged	• Check Filter(s)
	• Plugged Intake Hose	• Check Hose
	• Fan Control Panel Bad	• Call nearest service rep.
	• Fan Connection Bad	• Call nearest service rep.
	• Fan Bad	• Call nearest service rep.

Chapter

8

8. Recycling

Recycling Instructions for Device, Accessories and Packaging

Device

- Internal housing shell and brackets should be recycled as steel or aluminum.
- Plastic parts should be removed from the metal pads before recycling (for example, power appliance inlet, footswitch connector, main switch).
- All printed circuit boards should be recycled as electronic devices.
- Doors, skirt and top cover should be recycled as plastic.

Accessories

- All spare parts should be recycled according to the instructions above.
- Products which have been in contact with the patient need to be disinfected.

Packaging

- The carton, all other plastics, and inserts should be recycled (cardboard, foam, polyethylene)

ALL RECYCLING MUST BE IN COMPLIANCE WITH THE RELEVANT NATIONAL LAWS. GOVERNMENT AUTHORIZED RECYCLING CENTERS MUST BE USED.

Environmentally Relevant Material

COMPONENTS	LIST OF MATERIALS
ENCLOSURE AND ALL BRACKETS	• STEEL • ALUMINUM
PRINTED CIRCUIT BOARDS	• EPOXY • FR4
DOORS, TOP COVER, SKIRT (PLASTIC)	• FR ABS
TUBING	• URETHANE

THERE ARE NO HAZARDOUS MATERIALS PRESENT

Chapter

9

9. Warranty, Returns and Adjustments

Returns and Adjustments

Warranty claims must be made promptly and received by your nearest authorized Welch Allyn / Kreativ service representative during the warranty period. The liability of Kreativ Inc., under valid warranty claims, is limited to repair or replacement at purchaser's authorized Service Center or purchaser's place of business, at the option of the authorized service representative. If it is necessary to return a product for repair or replacement, authorization for the return must first be obtained from the authorized service representative.

All products returned for examination or warranty repair must be sent insured via a means of transportation specified by the authorized service representative.

Kreativ, Inc., or its authorized service representative claims the sole responsibility for determining the cause of any instrument failure. The adjustments are subject to Kreativ, Inc approval.

Limited Warranty

Kreativ Inc. warrants the equipment to be free from defects in material and workmanship for a period of 12 months from the date of shipment. Damage due to failure of customer to perform required user/preventive maintenance is not warranteed. Certain components having limited life (filters, intake liners) are not warranteed against normal wear and tear or customer damage. This limited warranty applies only to the original purchaser / user of the equipment.

The foregoing limited warranty is exclusive and in lieu of all other warranties, whether written, oral, or implied, and shall be purchaser's sole remedy and Kreativ's sole liability under contract or warranty or otherwise for the product.

Kreativ, Inc. disclaims any implied warranty of merchantability or fitness for particular purposes. In no event shall Kreativ, Inc. be liable for any incidental or consequential damages, or for any incidental or consequential damages arising out of, or in connection with, the use or performance of the product delivered hereunder.

Storage And Shipment

The Kreativ Model Klean Air II has been designed for long term usage in normal dental office environments. If it is to be stored for any reason for a long period, it should be covered to protect it from adverse conditions. The area it is to be stored in should meet the Environmental Limitations Transport and Storage Requirements indicated the Specifications section of Chapter 1.

The unit has been designed for shipment by normal commercial carriers. Protective packaging should be used, and the original packing materials should be reinstalled for shipment. Shipping instructions must be followed closely. The purchaser will be responsible for damage resulting from improper packing.